ABSTRACT

A two-dimensional array including two-dimensionally arranged transducers with M rows (M = 4) and N columns (N = 12) is separated into eight sub-arrays each including six transducers with m rows (m = 2) and n columns (n = 3). The sub-arrays with J rows (J = 2) and K columns (K = 4) are connected to eight intra-group processors IP(JJ, KK) (JJ = 1 to 2, KK = 1 to 4), respectively. A switch allows the selection of j pieces in the row direction (j = 2) (j ≤ J) and k pieces in the column direction (k < K) from the intra-group processors IP(JJ, KK) while shifting the selection in the column direction. The number of signal lines included in a cable for the connection with a main unit can be reduced, and power consumption also can be suppressed.